

# CAREFUL ANTIBIOTIC USE

# Otitis media with effusion does not require antibiotic treatment

#### **OTITIS MEDIA**

Differentiating Acute Otitis Media (AOM) from Otitis Media with Effusion (OME):
A tool for promoting judicious antibiotic use.

Always use pneumatic otoscopy or tympanometry to confirm middle ear effusion

No effusion Not OME or AOM

Yes effusion present

Signs or symptoms of AOM—including ear pain, fever, and bulging yellow or red TM

Yes

## No

#### AOM

Presence of effusion (always use pneumatic otoscopy or tympanometry)

signs or symptoms of acute infection (ear pain, fever, or bulging yellow or red TM).



#### **Treatment**

Choose narrow spectrum drugs first.

Amoxicillin remains highly effective and is recommended as the first-line antibiotic by most experts.<sup>1, 2</sup>

### OME

Presence of effusion (including immobility of the tympanic membrane)

without

signs or symptoms of acute infection. Nonspecific signs and symptoms (rhinitis, cough, diarrhea) are often present.

#### **Treatment**

Antibiotics are not required for initial treatment.3

Meta-analysis of all known studies showed only marginal short term benefit, and no long term benefit (>1 month) of antibiotic treatment.<sup>4</sup>

Only consider antibiotic prophalaxis for recurrent AOM as defined by  $\geq 3$  distinct, well documented episodes in 6 months (or  $\geq 4$  in 12 months).

Residual effusion after AOM normally persists for up to 6 weeks - no evidence of benefit from treatment in these cases.

Share this algorithm with parents. Explain when the risks of using antibiotics outweigh the benefits.

Avoiding unnecessary treatment of OME would save up to 6 - 8 million courses of antibiotics each year.<sup>3</sup>

#### References

- 1. McCracken GH. Considerations in selecting an antibiotic for treatment of acute otitis media. Pediatr Infect Dis J. 1994;13:1054-1057.
- 2. Barnett ED, Klein JO. The problem of resistant bacteria for the management of acute otitis media. Ped Clin NAmerica 1995;42:509-17
- 3. Stool SE, Berg AO, Berman S, et al. Otitis media with effusion in young children. Clinical practice guideline. AHCPR Publication no 94-0622 1994.
- 4. Williams RL, Chalmers TC, Stange KC, Chalmers FT, Bowlin SJ. Use of antibiotics in preventing recurrent acute otitis media and in treating otitis media with effusion. A meta-analytic attempt to resolve the brouhaha. JAMA 1993;270:1344-51.